US Army Corps
of Engineers
Rock Island District

U.S. Army Defense Ammunition Center and School
Savanna, Illinois

Defense Environmental Restoration Program
For
Formerly Used Defense Sites
Ordnance and Explosives Waste

Archives Search Report

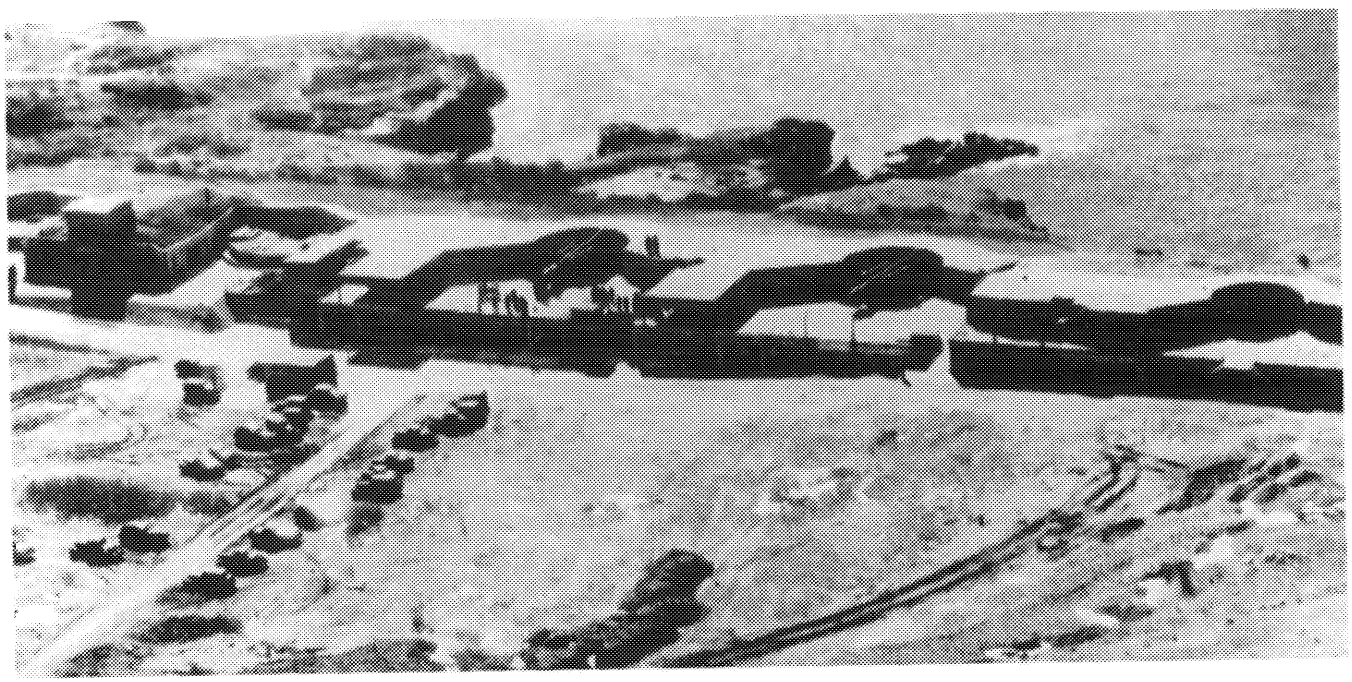
CONCLUSIONS AND RECOMMENDATIONS

For

FORT WETHERILL

Jamestown, RI
Project Number D01RI033703

March 1995



BATTERY WHEATON - FORT WETHERILL, RI, 1941

PROJECT FACT SHEET
FORMERLY USED DEFENSE SITES
March 1995

1. **SITE NAME:** Fort Wetherill

SITE NUMBER: D01RI033700

LOCATION:
CITY: Jamestown
COUNTY: Newport
STATE: Rhode Island

PROJECT NUMBER: D01RI033703

CATEGORY: OEW

2. **POC:**

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3. **SITE DESCRIPTION:** Fort Wetherill consisted of approximately 67 acres of land situated on Conanicut Island, just south of Jamestown, RI, and overlooking the East Passage of the entrance to Narragansett Bay. Approximately 58 acres of this land is owned and managed by the State of Rhode Island and used as a state park. Another 5.4-acre tract is privately owned and used for residential dwellings. The remaining 3.5 acres is owned by the Town of Jamestown, RI, and is used as the town's highway department facility. The areas of potential contamination are owned by the State of Rhode Island or lie within the territorial waters of the United States. Of the area owned by the Rhode Island, the state has assumed all responsibility for any environmental, remedial cleanup required. The potentially contaminated ocean area is acreage that has been added to the site as a result of this assessment.

4. **SITE HISTORY:**

a. In 1524, an Italian explorer recorded that the land where Fort Wetherill now stands would be suitable for the construction of any type of fortress for the protection of the harbor. The early colonists of New England also saw the need for protection of the harbor area and began to construct earthen fortifications around Narragansett Bay. During the American Revolution, Fort Brown (later Fort Wetherill) was heavily armed and engaged British warships at one time. The position was built up after the Revolution, renamed Fort Dumplings, but was never completed or armed.

b. Every major conflict involving the United States saw considerable activity on the old fort property, but it lay abandoned during most of the 19th century. The Spanish-American War brought considerable expansion to the fort, and the gun positions were greatly improved. More property was obtained and construction of concrete gun emplacements took place between 1898 and 1905. The fort was renamed Fort Wetherill on 4 April 1900 in honor of Captain Alexander M. Wetherill who was killed at San Juan Hill, Santiago, Cuba on 1 July 1898.

c. The 128th Mine Company took the assignment of the harbor mining operations at Fort Wetherill while the 130th and 117th Companies of the Coastal Artillery Corps manned the guns on the casemates. All assignments were temporary in nature, leaving the fort in a caretaker status most of the time until World War I (WW I). Some of the batteries were disarmed during that war to send the guns to places where there was greater need. After the war was over, Fort Wetherill was again put on caretaker status. Anti-aircraft positions were added in the early 1920's.

d. The years just prior to World War II (WW II) saw a great deal of preparation at the installation. Gun emplacements were improved and modified. Submarine mine fields were planned and prepared. Several batteries of the 243rd Coastal Artillery

manned the guns, and the 10th Coastal Artillery was responsible for the mining operations and the anti-submarine and anti-torpedo nets in the bay. All of the preparations were helpful in keeping enemy attacks at bay because the guns and the mines at Fort Wetherill were never fired in national defense.

e. In October 1945, a small section of the fort's property was declared surplus and sold the next year. The coastal guns were removed and salvaged for scrap, and the facility was replaced in a caretaker status. The Fort Wetherill property was passed back and forth between the Army and the Navy until the majority of the land was granted to the State of Rhode Island to be used as a state park. Later, the land comprising the old Fort Dumplings was also given to the state, while the only remaining fort property was given to the Town of Jamestown. By 1984, the U.S. Government had released all of its holdings at Fort Wetherill.

5. **PROJECT DESCRIPTION:**

Area A:

Size, Acres:	5.70
Former Usage:	Coastal defense batteries
Present Usage:	State park
Probable End Usage:	Same
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area B:

Size, Acres:	.56
Former Usage:	Coastal defense batteries
Present Usage:	Not used
Probable End Usage:	State park
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area C:

Size, Acres:	3.5
Former Usage:	Coastal fortress
Present Usage:	Not used
Probable End Usage:	State park
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area D:

Size, Acres:	3.25
Former Usage:	Anti-aircraft battery
Present Usage:	State park
Probable End Usage:	Same
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area E:

Size, Acres:	1.85
Former Usage:	Installation trash dump/submarine mine operation center
Present Usage:	Small boat harbor
Probable End Usage:	Same
Ordnance Presence:	Potential
Types:	Small arms/AAA cartridges/ propellant residue/submarine mine detonators
Density:	Unknown
Ordnance Depth:	Unknown
Risk Assessment:	5

Area F:

Size, Acres:	23.00
Former Usage:	Cantonment area
Present Usage:	State park/residential
Probable End Usage:	Same
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area G:

Size, Acres:	29.04
Former Usage:	All remaining lands
Present Usage:	State park/city utility
Probable End Usage:	Same
Ordnance Presence:	None
Types:	
Density:	
Ordnance Depth:	
Risk Assessment:	5

Area H:

Size, Acres:	14,733.00
Former Usage:	Mine field/artillery impact area
Present Usage:	Commercial/recreational water travel
Probable End Usage:	Same
Ordnance Presence:	Potential
Types:	Artillery projectiles/ submarine mines and components
Density:	Unknown
Ordnance Depth:	Unknown
Risk Assessment:	5

6. **STRATEGY:**

Area A: No further action
Area B: No further action
Area C: No further action
Area D: No further action
Area E: No further action
Area F: No further action
Area G: No further action
Area H: An EE/CA is proposed.

7. **ISSUES AND CONCERNS:**

Area A: Uncontaminated

Area B: Uncontaminated

Area C: Uncontaminated

Area D: Uncontaminated

Area E: Since the State of Rhode Island has used the lagoon as a dumping site, the State has assumed responsibility for any remedial cleanup required. Any remediation around the wharf would require careful note of tides, currents, and underwater animal species. Deer ticks with lyme disease are known to be on the fort property.

Area F: Uncontaminated

Area G: Uncontaminated

Area H: Entire area lies under the waters of Narragansett Bay. Any remediation in this area would require careful attention to tides, currents, marine traffic, and underwater animal species.

8. **CURRENT STATUS:**

PA: 100%
ASR: 100%
INTERIM RESPONSE ACTION: N/A
EE/CA:
Area A: None required at this time
Area B: None required at this time
Area C: None required at this time
Area D: None required at this time
Area E: None required at this time
Area F: None required at this time
Area G: None required at this time
Area H: As proposed above

RD: Not scheduled
RA: Not scheduled

9. **SCHEDULE SUMMARY:**

Phase	Orig Start	Sch Start	Actual Start	Orig Comp	Sch Comp	Actual Comp

10. **FUNDING/BUDGET SUMMARY:**

Year	Phase	Exec FOA	In House Required	Contract Required	Funds Obligated

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
for
FORMERLY USED DEFENSE SITES

CONCLUSIONS AND RECOMMENDATIONS

ORDNANCE AND EXPLOSIVE WASTE ARCHIVES SEARCH REPORT FOR FORT WETHERILL JAMESTOWN, RI PROJECT NUMBER D01RI033703

March 1995

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ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ACKNOWLEDGMENT

The following persons provided support as indicated.

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ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are provided by the Archives Search Report Team. These recommendations may not be the actions taken to remediate this site.

TABLE OF CONTENTS

TABLES

ATTACHMENT

A. Risk Assessment, Area A

B. Risk Assessment, Area B

C. Risk Assessment, Area C

D. Risk Assessment, Area D

E. Risk Assessment, Area E

F. Risk Assessment, Area F

G. Risk Assessment, Area G

H. Risk Assessment, Area H

REPORT PLATES

1. Site Map Circa 1945
2. Facility Layout Circa 1945
3. Project Areas
4. Project Area H
5. Current Ownership 1994

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

1. INTRODUCTION

a. Subject and Purpose

(1) This report presents the conclusions and recommendations of an historical records search and site inspection for ordnance and explosives waste (OEW) presence located at Fort Wetherill, Jamestown, Newport County, RI.

(2) The purpose of this investigation was to characterize the site for actual and/or potential ordnance/chemical warfare materiel (CWM) contamination, using available historical records, interviews, and the results of the on-site visual inspection.

b. Scope

(1) The investigation focused on 67 acres of land that was used by the War Department/Department of Defense as a coastal defense installation from 1902 through the end of World War II.

(2) The conclusions and recommendations presented in this report were drawn from available records and the visual site inspection. The conclusions, including ordnance risk assessments, were based on documented and reasonably inferred evidence from the investigation. The recommendations made are based on present DERP-FUDS program goals and policies, with implementation subject to approval and appropriate funding actions.

(3) For the purpose of this report, OEW is considered unwanted and abandoned ammunition or components thereof, which contains or contained energetic, toxic, or radiological materials, and was manufactured, purchased, stored, used, and/or disposed of by the War Department/Department of Defense.

2. CONCLUSIONS

a. Summary of Conclusions

Table 2-1 has been provided to summarize conclusions made on confirmed or potential OEW on/within the Fort Wetherill property.

Table 2-1
SUMMARY OF CONCLUSIONS

Area	Former Usage	Present Usage	Probable End Usage	Size Acres 1/	FUDS ELIGIBILITY		ORDNANCE PRESENCE			Risk Assessment Code
					Confirmed FUDS	Potential FUDS	Confirmed Ordnance	Potential Ordnance	Uncontaminated	
A	Artillery Batteries	State park	Same	5.70	Yes	-	-	-	Yes	5
B	Artillery Batteries	Not used	State park	.56	Yes	-	-	-	Yes	5
C	Coastal Fortress	Not used	State park	3.50	Yes	-	-	-	Yes	5
D	Anti-Aircraft Battery	State park	Same	3.25	Yes	-	-	-	Yes	5
E	Lagoon and Wharf	Small boat harbor	Same	1.85	Yes	-	-	2/	-	5
F	Cantonment Area	State park/ residential	Same	23.00	Yes	-	-	-	Yes	5
G	Additional Fort Lands	State park/ city utility	Same	29.04	Yes	-	-	-	Yes	5
H	Artillery Impact Area/ Mine Fields	Commercial/ recreational marine traffic	Same	3/	-	-	-	Yes	-	5

1/ Acreage is approximate.

2/ The State of Rhode Island has assumed the responsibility for any required cleanup.

3/ Additional 14,733.00 acres added by this ASR and not included in INPR.

b. Historical Site Summary

(1) In 1524, an Italian explorer recorded that the land where Fort Wetherill now stands would be suitable for the construction of any type of fortress for the protection of the harbor. The early colonists of New England also saw the need for protection of the harbor area and began to construct earthen fortifications around Narragansett Bay. During the American Revolution, Fort Brown (later Fort Wetherill) was heavily armed and engaged British warships at one time. The position was built up after the Revolution, renamed Fort Dumplings, but was never completed or armed.

(2) Every major conflict involving the United States saw considerable activity on the old fort property, but it lay abandoned during most of the 19th century. The Spanish-American War brought considerable expansion to the fort, and the gun positions were greatly improved. More property was obtained and construction of concrete gun emplacements took place between 1898 and 1905. The fort was renamed Fort Wetherill on 4 April 1900 in honor of Captain Alexander M. Wetherill who was killed at San Juan Hill, Santiago, Cuba on 1 July 1898.

(3) The 128th Mine Company took the assignment of the harbor mining operations at Fort Wetherill while the 130th and 117th Companies of the Coastal Artillery Corps manned the guns on the casemates. All assignments were temporary in nature, leaving the fort in a caretaker status most of the time until World War I (WW I). Some of the batteries were disarmed during that war to send the guns to places where there was greater need. After the war was over, Fort Wetherill was again put on caretaker status. Anti-aircraft positions were added in the early 1920's.

(4) The years just prior to World War II (WW II) saw a great deal of preparation at the installation. Gun emplacements were improved and modified. Submarine mine fields were planned and prepared. Several batteries of the 243rd Coastal Artillery manned the guns, and the 10th Coastal Artillery was responsible for the mining operations and the anti-submarine and anti-torpedo nets in the bay. All of the preparations were helpful in keeping enemy attacks at bay because the guns and the mines at Fort Wetherill were never fired in national defense.

(5) In October 1945, a small section of the fort's property was declared surplus and sold the next year. The coastal guns were removed and salvaged for scrap, and the facility was replaced in a caretaker status. The Fort Wetherill property was passed back and forth between the Army and the Navy until the majority of the land was granted to the State of

Rhode Island to be used as a state park. Later, the land comprising the old Fort Dumplings was also given to the state while the only remaining fort property was given to the Town of Jamestown. By 1984, the U.S. Government had released all of its holdings at Fort Wetherill.

c. Site Eligibility

(1) Former land usage by the War Department/Department of Defense was previously confirmed for 66.9 acres of this site as summarized in sections 2b(1) through (5) of this report. The site remained active until 19 October 1945, when its value to national defense began to wane. Over the next 20 years, this facility assumed less and less importance as a defense position until the majority of the property was disposed of in August 1973 and November 1974.

(2) Quitclaim deeds restricted the use of approximately 58 acres to use as a public park or recreation area and contained recapture clauses, returning the land to U.S. Government control in the case of a national emergency. The mineral rights and the right to extract those minerals were also retained by the Government. The 3.5 acres that was granted to the Town of Jamestown by quitclaim deed was restricted to public health purposes for 30 years and also contained a recapture clause returning the property to the U.S. Government in the event of a national emergency. Mineral rights remained with the Government in this case as well. The quitclaim deed which conveyed 5.4 acres of land to George L. Crawford contained no recapture clauses and retained the mineral rights only for fissionable material on the property (see plate 5).

d. Visual Site Inspection

(1) The site inspection of Fort Wetherill was conducted during the period of 25 October through 4 November 1994. The team visited the 67-acre site several times and found no ordnance or evidence of OEW contamination on or around the site.

(2) Interviews with site-related personnel and local authorities revealed no evidence of OEW at any of the project areas. However, interviews and studies did disclose the possibility that OEW contamination may exist in Areas E and H.

e. Confirmed Ordnance Areas

(1) Confirmation of ordnance presence is based on verifiable historical evidence or direct witness of ordnance items.

(2) There was no evidence of any OEW at any area of the site. Interviews with local individuals indicated that no OEW had been found.

f. Potential Ordnance Areas

Potential ordnance contamination is based on a lack of confirmed ordnance. Potential ordnance contamination is inferred from records or indirect witness. Inference from historical records would include common practice in production, storage, usage, or disposal, at that time, which could have allowed present day ordnance contamination. Areas E and H are considered to be potentially contaminated (see plates 3 and 4).

g. Uncontaminated Ordnance Areas

Uncontaminated ordnance subsites are based on a lack of confirmed or potential ordnance evidence. Areas A, B, C, D, F, and G are considered to be uncontaminated (see plate 3).

h. Other Environmental Hazards

(1) The possibility of HTRW contamination exists in Area E, due to the former use of this site as a trash dump.

(2) Due to the methods of disposal at the time, Fort Wetherill was in existence as a military post, the likelihood is high that the lagoon (former dump) contains HTRW contamination. The State of Rhode Island has also used this location as a trash dump since obtaining the land and has assumed the responsibility for any cleanup of the dump site if it is required (see plate 3).

3. RECOMMENDATIONS

a. Summary of Recommendations

(1) Table 3-1 provides a summary of recommended actions.

TABLE 3-1
SUMMARY OF RECOMMENDATIONS

			PA ACTIONS	OEW ACTIONS				HTRW ACTIONS	BD/DR ACTIONS
Area	Former Usage	Size Acres 1/	Prepare INPR	No Further Action	Perform ASR	Implement Interim Response	Perform EE/CA	Perform SI	Perform SI
A	Artillery Batteries	5.70	-	Yes	-	-	-	-	-
B	Artillery Batteries	.56	-	Yes	-	-	-	-	-
C	Coastal Fortress	3.50	-	Yes	-	-	-	-	-
D	Anti-Aircraft Battery	3.25	-	Yes	-	-	-	-	-
E	Lagoon and Wharf	1.85	-	Yes 2/	-	-	-	2/	-
F	Cantonment Area	23.00	-	Yes	-	-	-	-	-
G	Additional Fort Lands	29.04	-	Yes	-	-	-	-	-
H	Artillery Impact Area/ Mine Fields	3/	-	-	-	-	Yes	-	-

1/ Acreage is approximate.
2/ The State of Rhode Island has assumed the responsibility for any required cleanup.
3/ Additional 14,733 acres added by this ASR and not included in INPR.

(2) Recommended engineering evaluation and cost analysis actions are summarized in Table 3-2.

TABLE 3-2
EE/CA ISSUES AND CONCERNS

Area	Size, Acres*	EE/CA Design Item	Issues and Concerns
H	14,733	Field Investigation	Tidal action creates strong underwater currents in this area of the bay. Marine traffic is heavy. Underwater animal species can be expected to be present. Deer ticks carrying lyme disease are known to be on the shores surrounding this area.
		Site End Use	Commercial/ recreational marine traffic

* Acreage is approximate

b. Preliminary Assessment Actions

The preliminary assessment of Fort Wetherill and the Findings and Determination of Eligibility (FDE) accurately describe the 13,927.8 acres as owned and used by the War Department. No other preliminary assessment action will be required at this time.

c. Ordnance and Explosive Waste Actions

(1) Areas A, B, C, D, F, and G: No further action is required.

(2) Area E: The lagoon at this subsite is owned and has been used as a dump by the State of Rhode Island. The state has accepted responsibility for any cleanup required on this part of the subsite. Any OEW discovered in the wharf area should be dealt with on a case-by-case basis by the appropriate authorities. No further action is required (see plate 3).

(3) Area H: It is recommended that an EE/CA be done to determine if any remedial action on this subsite is feasible or necessary (see plates 3 and 4).

d. Other Environmental Remediation Actions

(1) No HTRW or other environmental remedial actions are recommended.

(2) No BD/DR projects are recommended. However, it should be noted that many structures on the facility, especially in Areas A and B, are deteriorating and in an advanced state of disrepair. These structures pose considerable physical hazard to those visiting the present state park (see plate 3).

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
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ATTACHMENT A

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	D01RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area A)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

_____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

_____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

_____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

_____

==========

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT B

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	DO1RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area B)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

TOTAL HAZARD SEVERITY VALUE 0
(Sum of Largest Values for A through E--Maximum of 61).
Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) *Usually indicates that no further action (NOFA) is necessary.* Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT C

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	D01RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area C)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5
Chemical and Radiological (Select the largest single value)	0

What evidence do you have of chemical/radiological OEW? _____

_____

==========

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) *Usually indicates that no further action (NOFA) is necessary.* Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT D

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	DO1RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area D)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

==========

TOTAL HAZARD SEVERITY VALUE 0
(Sum of Largest Values for A through E--Maximum of 61).
Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2
Location (Select the single largest value)	_____

What evidence do you have regarding location of OEW? _____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	_____

What are the nearest inhabited structures? _____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT E

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	D01RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area E)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

_____

==========

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

The lagoon has been rated as potentially contaminated due to its former usage as a dump for the fort. After ownership of this area passed to the State of Rhode Island, the lagoon was again used for dumping. As a result of this, the State has assumed responsibility for any clean up of this site. Due to the lack of OEW discoveries found in the vicinity of the wharf, incidents of such discoveries should be dealt with on a case-by-case basis.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT F

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	D01RI033703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area F)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability.** Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

==========

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT G

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	DO1RIO33703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area G)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

==========

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

(RAC 5) *Usually indicates that no further action (NOFA) is necessary.* Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

ATTACHMENT H

RISK ASSESSMENT

18 Apr 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Fort Wetherill	Rater's Name	Greg Lippman
Site Location	Jamestown, RI	Phone No.	(815) 273-8038
DERP Project #	DO1RIO33703	Organization	CENCR-ED-DN/SMCAC-ESL
Date Completed	27 March 1995	RAC Score	5 (Area H)

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND video tape entitled "A Life Threatening Encounter: OEW."

Part 1. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPES OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	0

What evidence do you have regarding conventional OEW? _____

B. Pyrotechnics. (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorous or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e. Napalm, Triethlaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smoke (other than WP)	4
Pyrotechnics (Select the largest single value)	0

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (Not an integral part of convention ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosive (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Composition A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc).	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc).	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding propellants? _____

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5

Chemical and Radiological (Select the largest single value) 0

What evidence do you have of chemical/radiological OEW? _____

_____

==========

TOTAL HAZARD SEVERITY VALUE 0
(Sum of Largest Values for A through E--Maximum of 61).
Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	11 to 20
MARGINAL	III	5 to 10
NEGLIGIBLE	IV	1 to 4
**NONE		(0)

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other related factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings or Structures	3
Subsurface	2

Location (Select the single largest value) _____

What evidence do you have regarding location of OEW? _____

_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) _____

What are the nearest inhabited structures? _____

_____

C. Number of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) _____

Narrative _____

_____

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) _____

Describe types of buildings in the area. _____

_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (of any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated Site	1
a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility, or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitor, locked entrance, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) _____

Describe the site accessibility. _____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Example would be excessive soil erosion by beaches or streams, increasing land development that could reduce distance from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0

Site Dynamics (Select largest value) _____

Describe the site dynamics. _____

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY*

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
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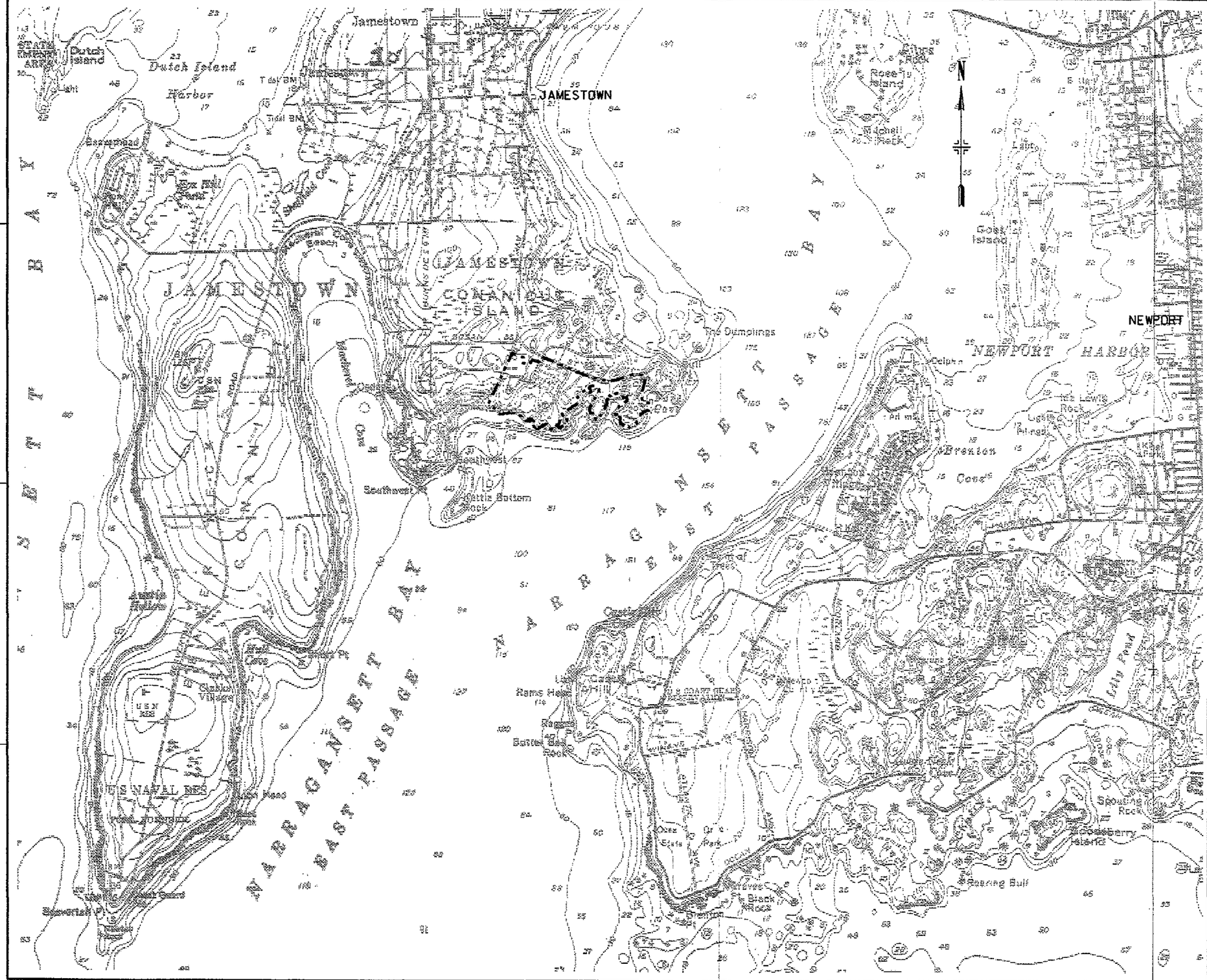
RAC 5 Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

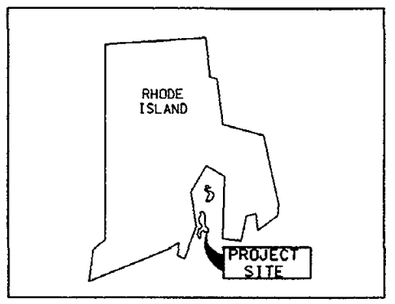
Part IV. Narrative. Summarize the documented evidence that support this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

Personal interviews indicate that this area is probably contaminated with OEW, but determination could not be made on site due to the lack of equipment to inspect the underwater areas of the entrance to Narragansett Bay. The area of potential contamination lies within the water expanse of the Fort Wetherill firing fans to the maximum range of the guns that were there; however, the numerous mine fields and the overlapping fields of fire from the coastal defense installations in the area preclude accurate determination of the origin of any projectiles or mines in the project area. An EE/CA should be done to determine if further investigation of area is feasible.

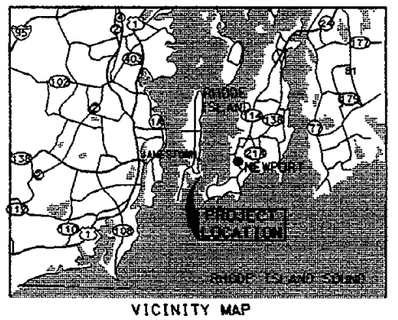
ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORT WETHERILL
JAMESTOWN, RI
PROJECT NUMBER D01RI033703

REPORT PLATES





STATE MAP



VICINITY MAP

LEGEND

SITE BOUNDARY CIRCA 1945

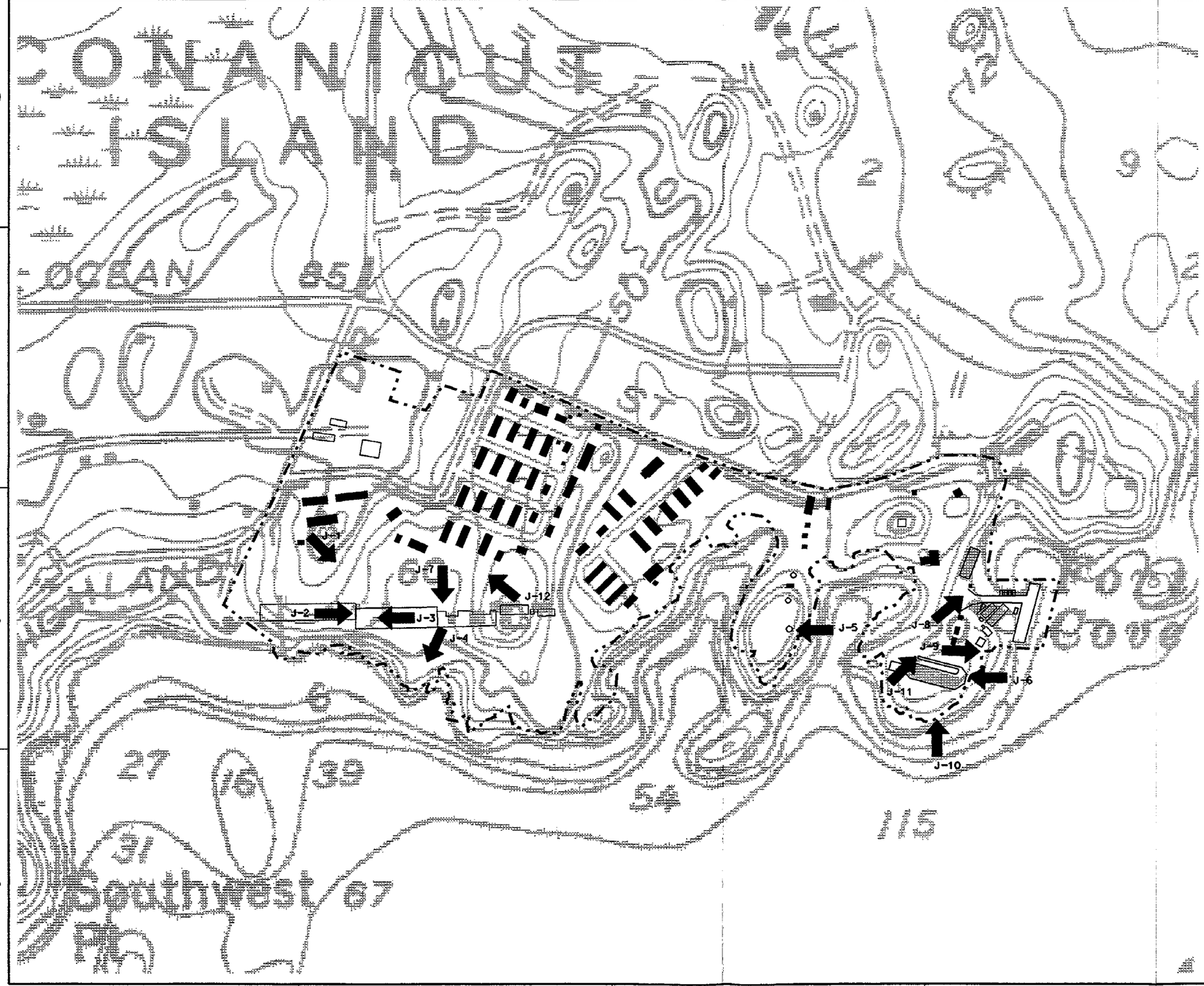
1000 500 0 1000 2000FT

Revisions			
Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed by: M.P.L.	FT. WETHERILL N.U.S.C. CONANICUT ISLAND R.I.
Drawn by: B.G.H.	
Checked by: B.H.S.	SITE MAP CIRCA 1945
Reviewed by: D.J.H.	Scale: AS SHOWN
Approved by:	Date:
	Drawing Code:
	Sheet reference number:
	Solicitation Number:
	Sheet of

PLATE 1



Revisions			
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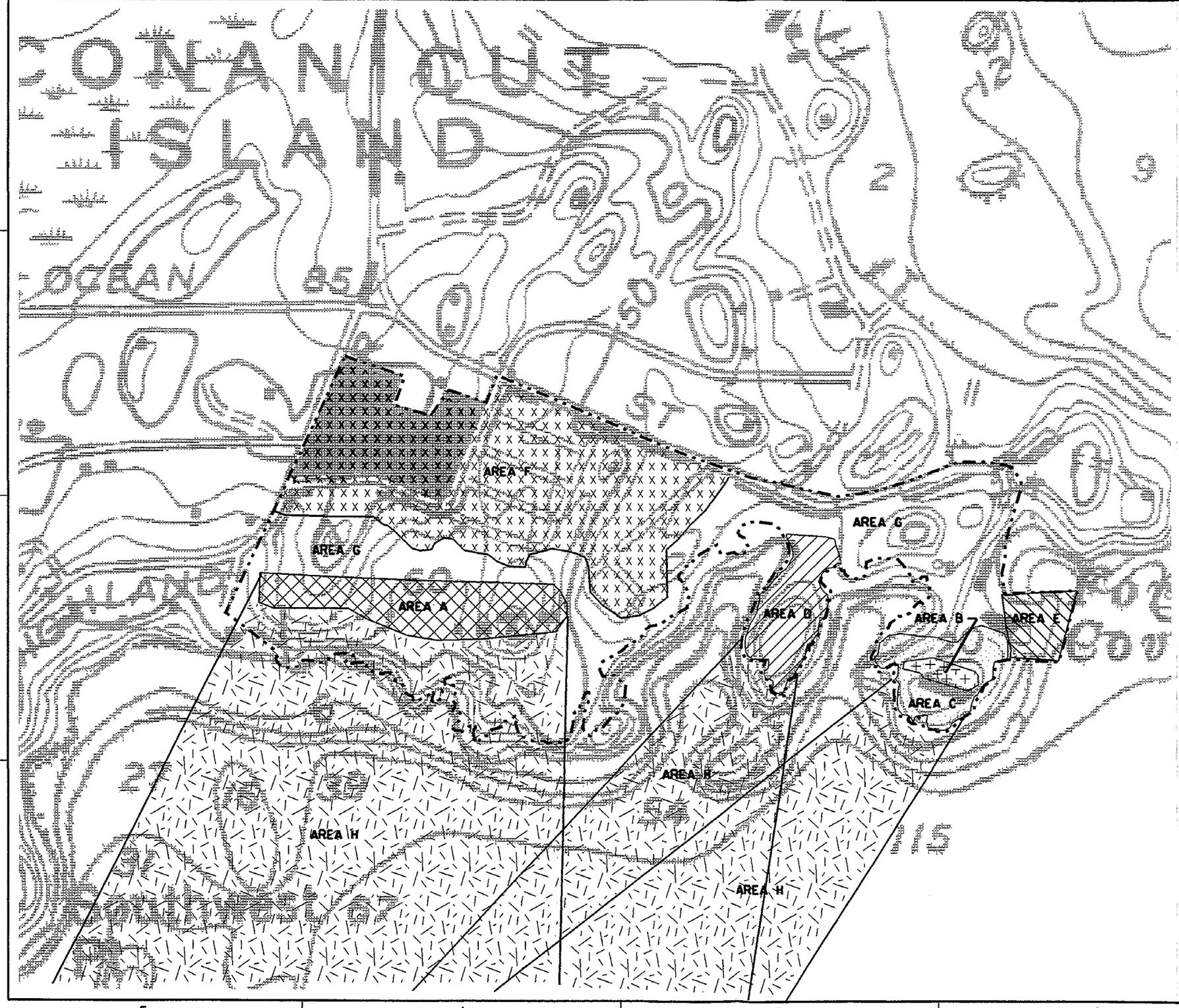
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed by: M.P.L.	FT. WETHERILL N.U.S.C. CONANICUT ISLAND R.I.
Drawn by: B.G.H.	
Checked by: B.H.S.	FACILITY LAYOUT CIRCA 1945
Reviewed by: D.J.H.	Scale: AS SHOWN
Approved by:	Dates:
	Drawing Code:
	Sheet reference number:
	Solicitation Number:
	Sheet of

US Army Corps of Engineers New England District

PLATE 2



AREA		FORMER USAGE	DEW PRESENCE	ACRES
	A	WESTERN BATTERIES	UNCONTAMINATED	5.7*
	B	EASTERN BATTERIES	UNCONTAMINATED	.56*
	C	FORT DUMPLINGS	UNCONTAMINATED	3.5*
	D	ANTI-AIRCRAFT BATTERY	UNCONTAMINATED	3.25*
	E	LAGOON AND WHARF	POTENTIAL	1.85*
	F	CANTONMENT AREA	UNCONTAMINATED	23.0*
	G	ALL REMAINING LANDS	UNCONTAMINATED	29.04*
	H	ARTILLERY IMPACT AREA	POTENTIAL	
		TOTAL SITE ACREAGE (FDE ACREAGE 61.5))		66.9
		ADDITIONAL ACREAGE		14,733.0

* APPROXIMATE ACREAGE

LEGEND

SITE BOUNDARY

PART OF AREA F NOT INCLUDED IN FDE (5.4AC)

NOTE: SEE PLATE 4 FOR ADDITIONAL INFO ON AREA H

200 100 0 200 400FT

Revisions			
Symbol	Description	Date	Approved

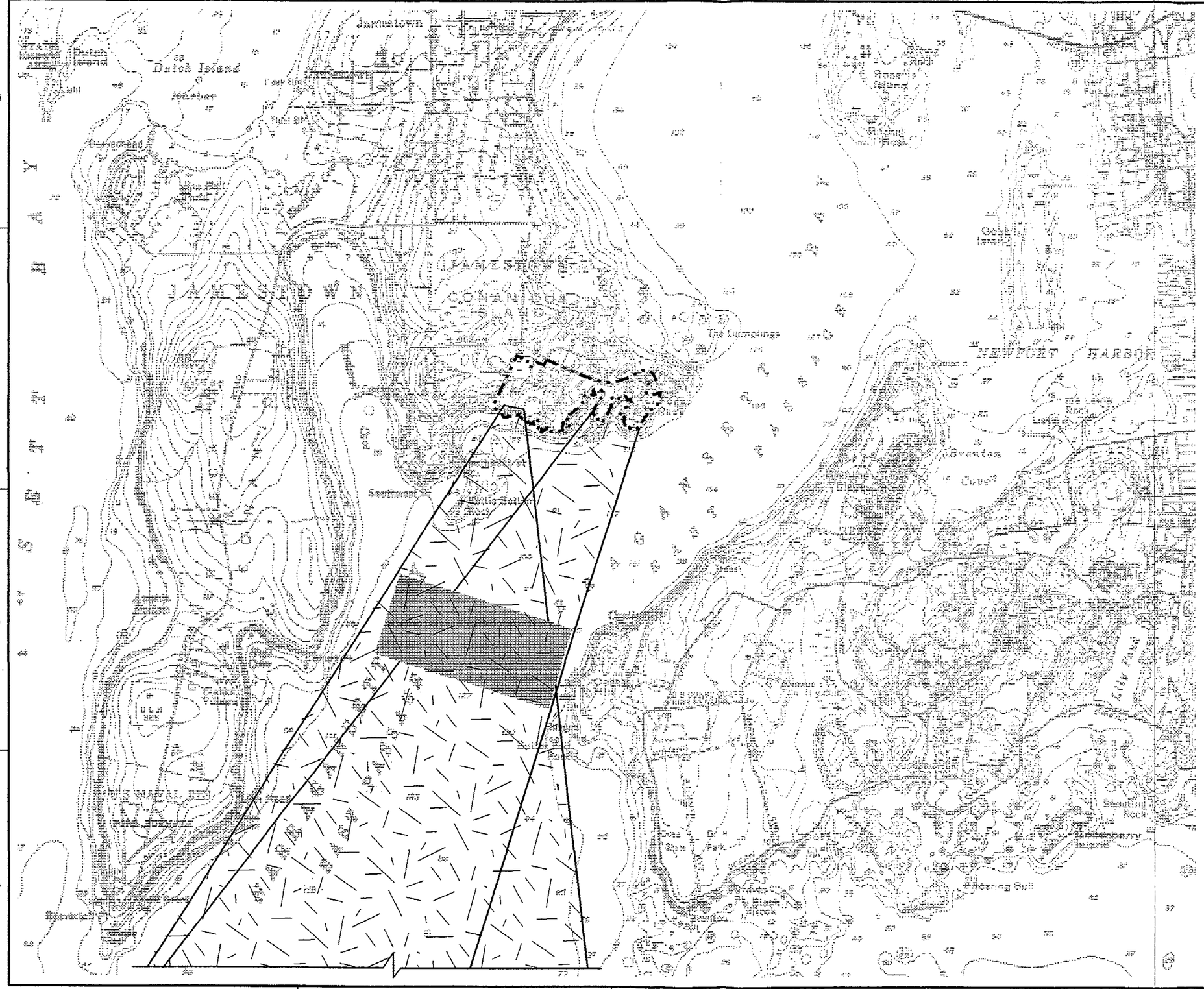
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

FT. WETHERILL N.U.S.C.
CONANICUT ISLAND R.I.

PROJECT AREAS

Designed by: M.P.L.	Scale: AS SHOWN	Sheet reference number:	Solicitation Number:
Drawn by: B.G.H.	Dates:		
Checked by: B.H.S.	Drawing Code:		Sheet of
Reviewed by: D.J.H.			
Approved by:			

PLATE 3



N

LEGEND

- SITE BOUNDARY
- FIRING FAN BOUNDARY
- MINE FIELD
- ARTILLERY IMPACT AREA

NOTE: FIRING FAN RANGE NOT INCLUDED IN ITS ENTIRETY. ACTUAL RANGE IS 17,500 YDS

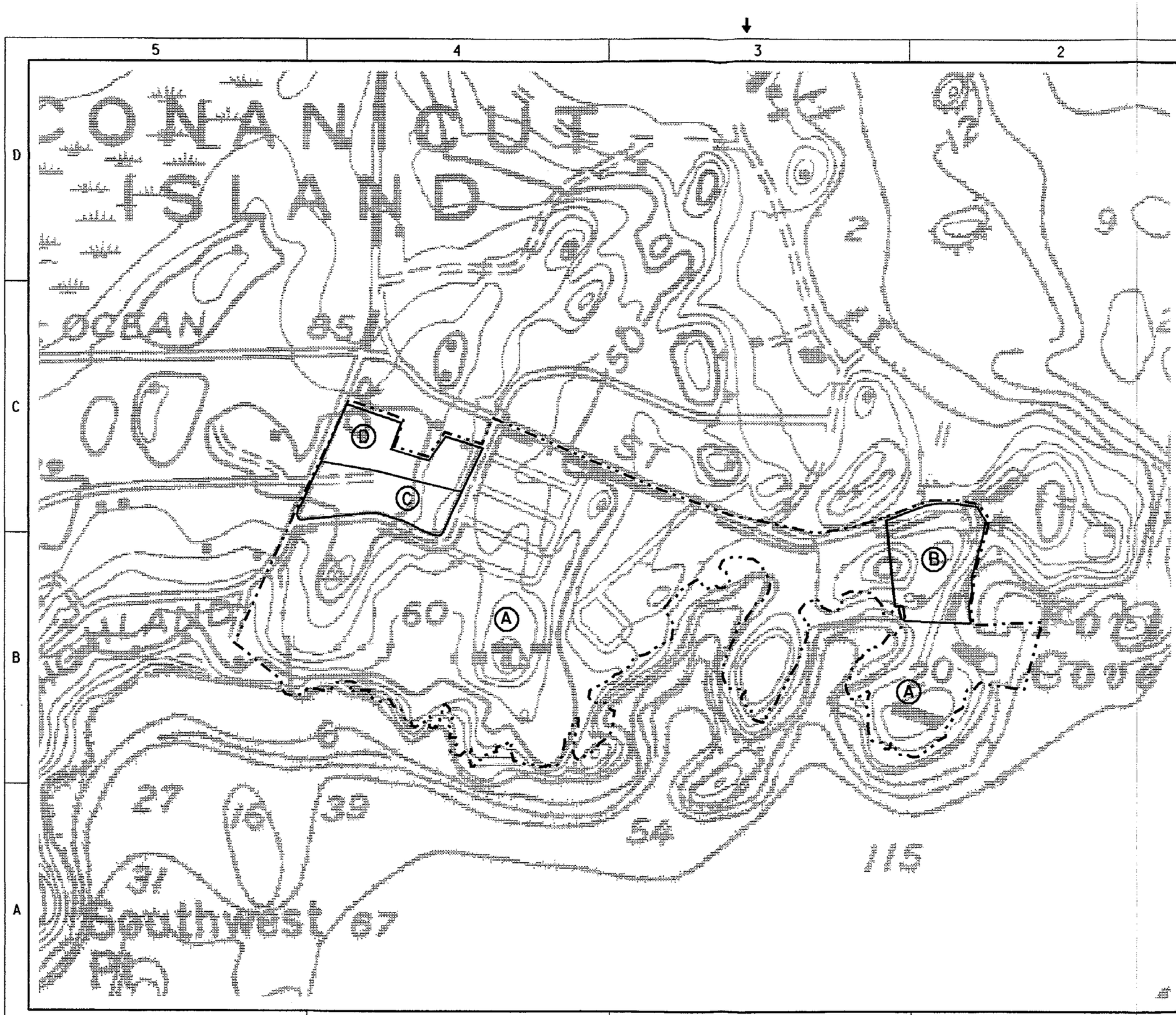
1000 500 0 1000 2000FT

Revisions			
Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed by: M.P.L.	FT. WETHERILL N.U.S.C. CONANICUT ISLAND R.I.
Drawn by: B.G.H.	
Checked by: B.H.S.	PROJECT AREA H
Reviewed by: D.J.H.	Scales: AS SHOWN
Approved by:	Dates:
	Drawing Codes:
	Sheet reference numbers:
	Solicitation Number:
	Sheet of

PLATE 4



CURRENT OWNERSHIP

- (A) STATE OF RHODE ISLAND
- (B) TOWN OF JAMESTOWN
- (C) JANE ALDEN SCOTT
- (D) GEORGE LEWIS CRAWFORD

LEGEND

- SITE BOUNDARY
- OWNERSHIP BOUNDARY

200 100 0 200 400FT

Revisions			
Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed by: M.P.L.	FT. WETHERILL N.U.S.C. CONANICUT ISLAND R.I.
Drawn by: B.G.H.	
Checked by: B.H.S.	CURRENT OWNERSHIP 1994
Reviewed by: D.J.H.	Scale: AS SHOWN
Approved by:	Dates:
	Drawing Code:
	Sheet reference number:
	Solicitation Number:
	Sheet of

PLATE 5